

WHAT IS CLAIMED IS:

1. A melt spinning apparatus comprising: a spinning unit disposing a spinning plate having a plurality of nozzles and a cooling device disposed below said spinning nozzle,

wherein the nozzles of said spinning plate are arranged annular in at least one circle, and a cylindrical filter is disposed at an exit of a cooling wind in said cooling device so as to enclose around a spun yarn discharged from said spinning plate, the annular diameter of said nozzles being from no less than 0.6 times to one time of the internal diameter of said cylindrical filter, and the flow velocity of the cooling wind blown from said cylindrical filter being distributed gradually higher according to the downstream of the spun yarn.

2. A melt spinning apparatus as set forth in Claim 1,
wherein the center distance between the adjoining nozzles in said plurality of nozzles is no less than 8 times of the diameter of said nozzles.
3. A melt spinning apparatus as set forth in Claim 1 or 2,
wherein a cylindrical flow guide for said cooling wind is disposed to enclose an outer circumference of said cylindrical filter, an inner wall of said cylindrical flow guide made inclined close to an upper side of said cylindrical filter.
4. A melt spinning apparatus as set forth in Claim 3,
wherein a plurality of rectifying vanes are arranged on an inner wall of said cylindrical flow guide to extend radially toward the center of said cylindrical filter and at intervals in the circumferential direction on said inner wall.

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5. A melt spinning apparatus as set forth in Claim 3,
wherein a guide tube is connected to the lower end of said
cylindrical filter.